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(71) Applicant
Qun-Min Lu,
No 2, Lane 19, Sec 2, Chung Yang Rd, San Chung City,
Taipei Hsian, Taiwan

(72) Inventor
Qun-Min Lu

(74) Agent and/or Address for Service
Langner Parry,
52-54 High Holborn, London, WC1V 6RR

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GB 1598098 GB 1399829 GB 0408452
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F4H

(54) A drink cooler

(57) A drink cooler includes a container 3 having an open top and capable of containing a cold drink within the inner surface thereof and a passage 25 for the passage therethrough of a refrigerant, held attached to the outer surface of the container 3 and adapted to perform the refrigerant-evaporation process in a refrigeration cycle so that when clean/high-temperature water and the material which is to be the contents of the cold drink are poured into the container and the refrigeration cycle is actuated, the container is capable of preparing therein a cold drink as desired. An electromagnetically operable valve 35 is provided for emptying the container. A transparent cover 33 may close the container.

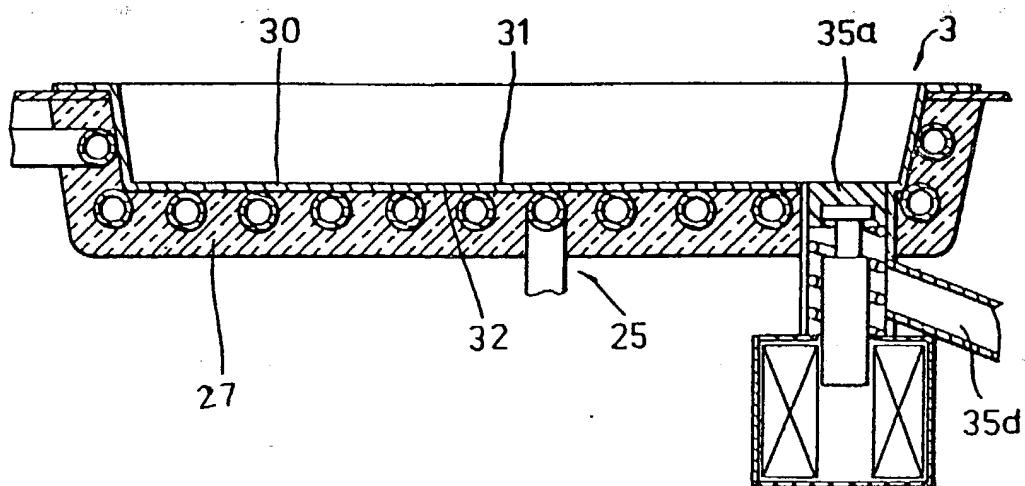


FIG. 2

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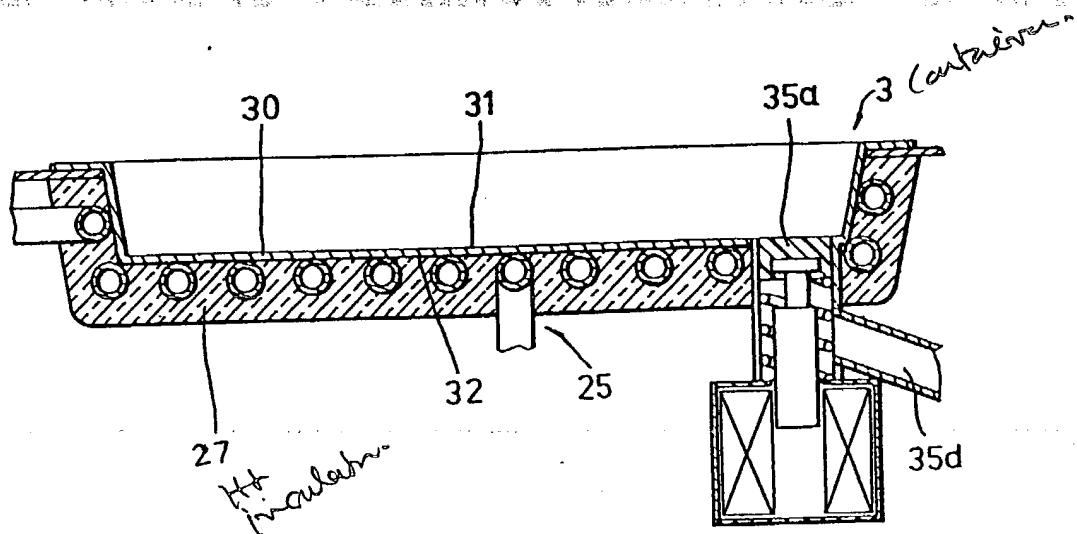


FIG. 2

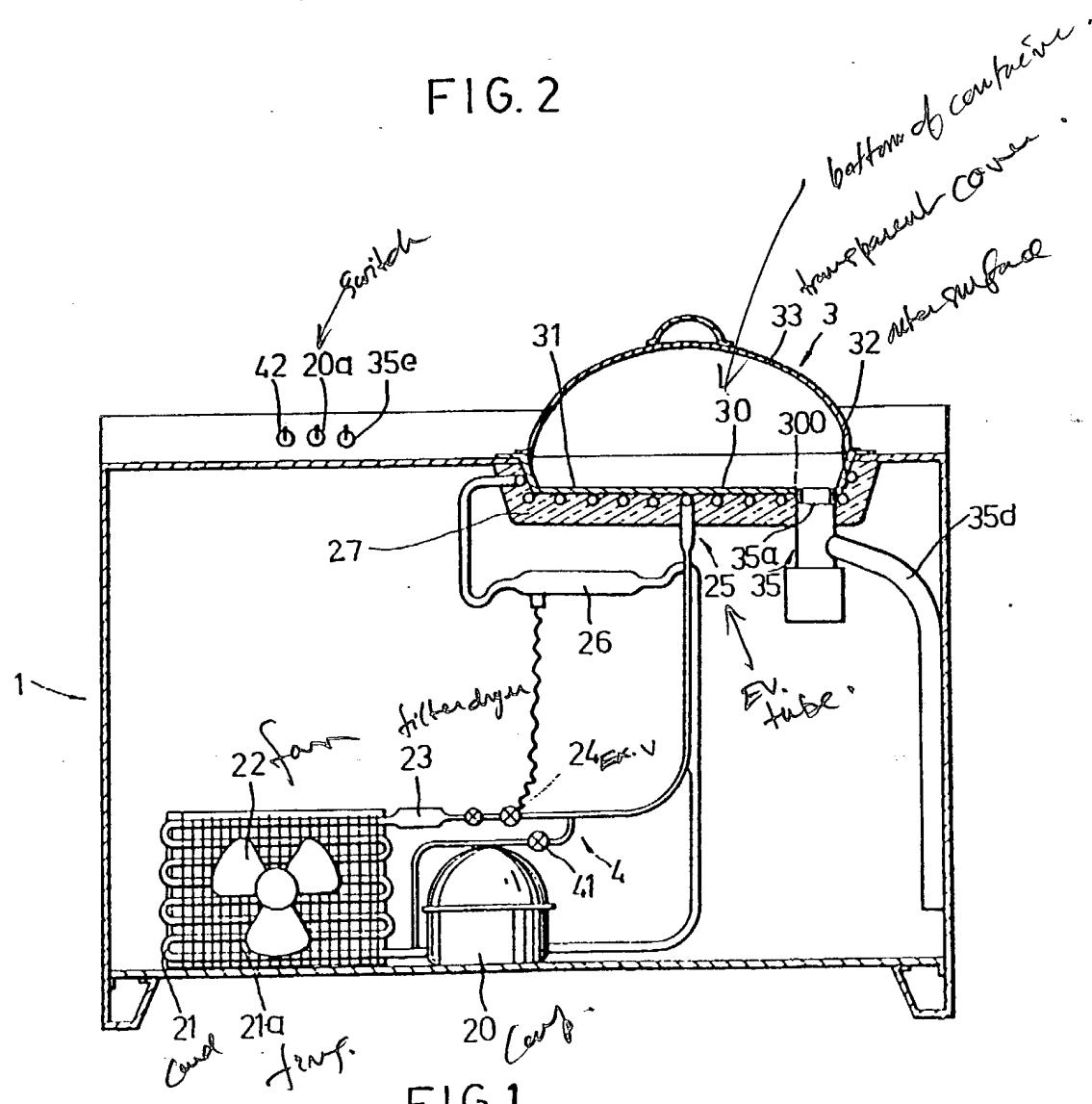


FIG.1

SPECIFICATION

A drink cooler

5 The present invention relates to a drink cooler, and more particularly to a cooler directly attached to a refrigerating system.

10 A cold or cooling drink is usually prepared by adding the crushed ice obtained from an ice crushing device to a cooked and cooled food or some fruit juice. However, the ice purchased for preparing the crushed ice may not meet with the necessary hygienic requirements. In addition, there are itinerant peddlers

15 who sell sherbet ice prepared by mixing a dense fruit juice with the cold water in a revolving inner barrel in which the mixture is indirectly and slowly frozen by a refrigerating system sealingly connected to an outer barrel.

20 Upon refrigeration, the mixture must be stirred by a stirring bar and the inner barrel must be kept in revolution in order that the mixture is uniformly frozen but kept in a state not truly solidified. The refrigerating system is switched

25 off when the mixture is to be solidified and switched on again after a period of time controlled by the peddler. However, such sherbet ice is subject to the following shortcomings:

30 1) The peddler cannot predict how much mixture he can sell in a day. Thus, the remaining mixture can only be discarded or kept for sale the next day, which is not particularly, hygienic in the summer.

35 2) If the refrigerating system is switched off for too long a period of time, the inner barrel creates a perfect environment for culturing bacteria.

40 3) When scooping the mixture out of the inner barrel, the stirring bar must be taken out of the inner barrel and thereafter replaced again. Thus, the stirring bar is easily contaminated.

45 4) The inner barrel can only prepare one kind of cold drink at a time.

50 It is therefore attempted by the applicant to deal with the above problems encountered by the prior art.

55 It is therefore an object of the present invention to provide a drink cooler capable of preparing a cold drink in a more hygienic style.

60 It is therefore another object of the present invention to provide a drink cooler capable of preparing a cold drink in a more efficient style.

65 It is further an object of the present invention to provide a drink cooler capable of preparing various cold drinks using different contents in a short time.

According to the present invention, a drink

70 cooler includes a container having an open top and capable of containing a cold drink within the inner surface thereof and a passage capable of passing therethrough a refrigerant, held attached to the outer surface of the container and adapted to perform the refrigerant-

evaporation process in a refrigeration cycle so that when clean/high-temperature water and the material which is to be the contents of the cold drink are poured into the container and the refrigeration cycle is actuated, the container is capable of preparing therein a cold drink as desired.

Certainly, the present cooler can further include a cover matching with the upper portion of the container.

Preferably the container has a bottom provided with a through hole adapted to be governed by an electromagnetic valve and to discharge therefrom the water after it has been used to wash the container.

Preferably the container is of pan-like shape, the passage is a coiled evaporating tube and the elements for achieving the refrigeration cycle further include a compressor, a condenser, a drier & filter, a refrigerant accumulator and a defroster.

Preferably the outer surface and the passage are heat-insulated, the cover is transparent and the valve body of the electromagnetic valve is made of polytetrafluoroethylene.

The present invention may best be understood with reference to the accompanying drawings, in which:

Figure 1 is a sectional view showing a preferred embodiment of a cold drink cooler according to the present invention; and

Figure 2 is a sectional view for better showing an electromagnetic valve mounted on a through hole on the bottom of the container of a cold drink cooler according to the present invention.

Referring now to the drawings, a cold drink cooler includes a housing 1, with a container 3 which is of pan-like shape mounted thereon, has an open top and is capable of containing a cold drink within the inner surface thereof 31, and a passage 25 which is a coiled evaporating tube which is capable of passing therethrough a refrigerant, is held attached to

105 the outer surface 32 of container 3 in heat insulation 27 and performs the refrigerant-evaporation process in a refrigeration cycle, the elements for achieving which include a compressor 20 controlled by a switch 20a and connected to a condenser 21, which is further provided with heat-dissipating fins 21a and fan 22 connected to a drier & filter 23 connected to an expansion valve 24 connected to an end of evaporating tube 25 the other end

110 of which is connected to a refrigerant accumulator 26 connected to compressor 20. Outer surface 32 and evaporating tube 25 are heat-insulated. Through the above arrangement, when clean and/or high-temperature water together with the material which is desired to be the contents of the cold drink is poured into container 3 and the compressor switch 20a is switched on, container 3 is capable of preparing therein a desired cold drink. In an

125 130 actual embodiment, 1 Kg of 80°C mixture,

which is made of the water and the desired added material and poured into container 3, is solidified in about 4 minutes. The present cooler can further be provided with a de-
5 froster 4, which is actuated when the cold drink becomes too solidified, governed by an electromagnetic valve 41 controlled by a switch 42. Furthermore, the bottom 30 of container 3 is provided with a through hole
10 300 governed by an electromagnetic valve 35 which is controlled by a switch 35e, dis- charges therefrom the water after it has been used to wash container 3 and has its valve body made of polytetrafluoroethylene. In addition, the present cooler is further provided
15 with a transparent cover 33 matching with the upper portion of container 3. Besides, a pan- shovel can be introduced to aid the solidifica-
tion and uniformity of the cold drink.

20

CLAIMS

1. A drink cooler comprising:
a container having an opening in the top thereof and being arranged to contain a cold drink therein; and a refrigerant passage for passing a refrigerant therethrough, which passage is in contact with the outer surface of the container whereby when clean water and drink concentrate are placed into the container
25 and the refrigeration cycle is actuated, the container is capable of preparing therein a cold drink as desired.
2. A drink cooler as claimed in Claim 1, wherein said cooler further comprises a cover
30 matching with the opening of the top of said container.
3. A drink cooler as claimed in Claim 2, wherein the said cover is transparent.
4. A drink cooler as claimed in Claim 1, 2
40 or 3, wherein the bottom of said container is provided with a through hole the opening of which is controllable by an electromagnetic valve for discharging water therefrom after the water has been used to wash said container.
- 45 5. A drink cooler as claimed in Claim 4, wherein the valve body of said electromagnetic valve is made of polytetrafluoroethylene.
6. A drink cooler as claimed in any one of Claims 1 to 5 wherein: said container is a
50 pan-like shape; said refrigerant passage is a coiled evaporating tube; and the elements for achieving said refrigeration cycle further include a compressor, a condenser, a drier and filter, a refrigerant accumulator and a de-
55 froster.
7. A drink cooler as claimed in any one of Claims 1 to 6, wherein: said outer surface of the container and said refrigerant passage are covered with a heat insulating material.
- 60 8. A drink cooler substantially as hereinbefore described with reference to, and as illustrated in the accompanying drawings.

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